

Task 4: Mini-Lesson #2 - Dividing Polynomials

Ex. 1

Dividing a Polynomial by a Constant

Determine the quotient:

a) $\frac{4a^2 - 8}{4}$ $a^2 - 2$

b) $\frac{-3m^2 + 15mn - 21n^2}{-3}$
 $m^2 - 5mn + 7n^2$

c) $(8n - 12) \div 4$ Rewrite
 $\frac{8n - 12}{4} = 2n - 3$

d) $(-3b^2 - 6b + 12) \div (-3)$ Rewrite
 $\frac{-3b^2 - 6b + 12}{-3} = b^2 + 2b - 4$

Ex. 2

Dividing a Polynomial by a Monomial

Determine the quotient:

Subtract the exponents on common variables to simplify

a) $\frac{-10m^2}{2m}$ $\frac{-10 \cdot m \cdot m}{2m}$ $-5m$

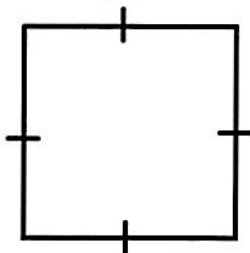
b) $\frac{30k^2 - 18k}{-6k}$ $-5k + 3$

c) $(6m^3 - 9m^2 + 15m) \div (3m)$ $\frac{6m^3 - 9m^2 + 15m}{3m}$ Rewrite as fraction $2m^2 - 3m + 5$

d) $(10y^4 + 8y^3 - 4y^2) \div (-2y^2)$ Rewrite as fraction $\frac{10y^4 + 8y^3 - 4y^2}{-2y^2}$ $-5y^2 - 4y + 2$

Ex. 3

Dividing a Polynomial by a Constant



A square has a perimeter of $24x^2 - 4x$, what is the length of one side.

$\frac{24x^2 - 4x}{4}$ $6x^2 - x$